

Work Order ID 146961

Monday, June 06, 2016 12:44:13 PM

146961

Page 1

Item ID: D4463-7

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Tank Fwd End

Start Date: 5/18/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 5/24/2016 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4463

D

105

0.00

105

Purchasing

Purchasing

Memo

ISSUE PO 321646
CUT PER DRWG D4463 REV.D

0.00

2

JUN 08 2016

DAS
13
9-89

115

Receive & Inspect for Damage & Mat'l Certs

0.00

115

Packaging

Packaging

Memo

0.00

2x SP/6-7-B

125

QC6- Inspect dimensions to drawing

0.00

125

QC

Quality Control

Memo

0.00

(2)

16-07-13 PD

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

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[illegible]

DQA: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
2AL 08 28-8									
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
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Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
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Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

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Page 3

Item ID: D4463-7

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Tank Fwd End

Start Date: 5/18/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 5/24/2016 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC7-Inspect Chemical Conversion Coat	0.00							DAS 38 9-89
160						2			
QC	Memo	0.02							NOV 03 2016
Quality Control									
170	Identify as per dwg & Stock Location: _____	0.00							
170						2			DAS 6 9-89
Packaging	Memo	0.02							NOV 07 2016
Packaging	LOCATION: WA003								
180	QC21- Final Inspection - Work Order Release	0.00							DAS 21 9-89
180									NOV 07 2016
QC	Memo	0.20							
Quality Control									

16-11-7

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WORK ORDER NON-CONFORMANCE / UPDATE

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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By 		
							Lead hand / Supervisor Approval Verification 		
							QC / QA Coordinator Approval 		

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : 			
Misidentified ☐	☐	Past Due ☐	☐				

Picklist Print

Page 1

Monday, June 06, 2016 12:44:13 PM

Work Order ID: 146961

146961

Parent Item: D4463-7

D4463-7

Parent Item Name: Tank Fwd End

Start Date: 5/18/2016

Required Date: 5/24/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 11.11.22 NEW ISSUE DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4463-7P		Purchased	No				Each	0.0000		2			
D4463-7P									**				
Tank Fwd End													
M6061T6S.063		Purchased	No			100	sf	746.4000	2.839	5.976842			
M6061T6S 063									**				
6061-T6 .063 Sheet													

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT021	410.4	
M133511	2.8	
M134377	4.9	
M134830	402.7	
TPI	336	
M134496	192	
M134604	144	

2x 80/6-F-B

6

DQA: _____ Date: _____

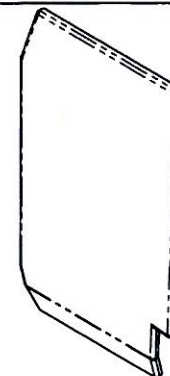
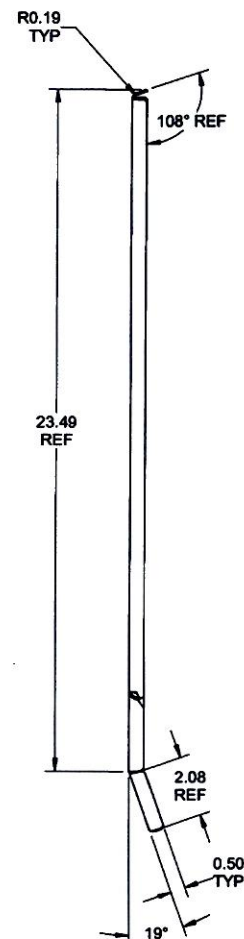
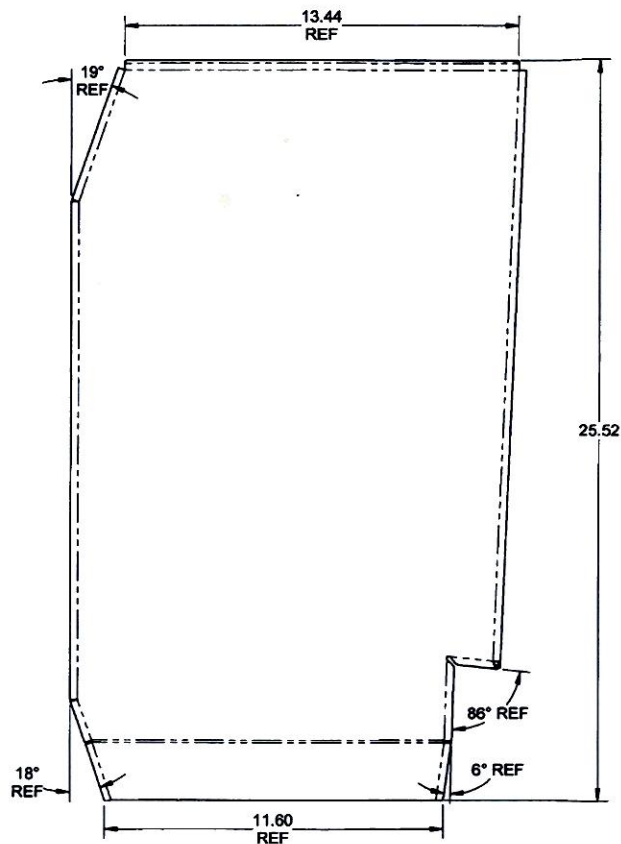
WORK ORDER NON-CONFORMANCE / UPDATE



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Misidentified ☐	Past Due ☐																																																																



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
10-146961 MLJ
16-0526

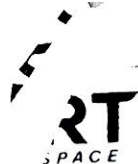
RELEASED
2014-06-11
[Signature]

D4463-7 TANK FORWARD END

NOTES:

- 1) MATERIAL: MADE FROM D4463-7F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 2.41 lbs

APPROVED	DESIGN	ML	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	DRAWN	ML		
	CHECKED	AP	DRAWING NO. D4463	REV. D
	MFG. APPR.	JLM	SHEET 7 OF 14	
	APPROVED	MP	TITLE	SCALE
	DE APPR.	DS	AUX TANK	NTS
DATE 14.05.13			COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO32646

Purchase Order Date 6/8/2016
PO Print Date 6/8/2016

Page Number 5 of 12

Order From :

TPI INDUSTRIES INC.
148 RUE GOODFELLOW
DELSON, QUEBEC J5B 1V4
CANADA

VC-TPI001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 450-633-0484

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

10127-2607

Net 30

CAD

Destination-Collect

11 D4463-7P Tank Fwd End

6/22/2016

Yes

6/22/2016

2.00

Each

\$5.80

\$11.60

CUT AS PER DWG D4463-7 REV. D
B146961
MATERIAL 6061-T6 SHEET .063

Sp16-7-13

Line Total:

\$11.60

12 D4463-13P tank bottom

6/22/2016

Yes

6/22/2016

2.00

Each

\$5.00

\$10.00

CUT AS PER DWG D4463-13 REV. D
B146951
MATERIAL 6061-T6 SHEET .063

Line Total:

\$10.00

13 D4463-1P tank bottom

6/22/2016

Yes

6/22/2016

2.00

Each

\$45.00

\$90.00

CUT AS PER DWG D4463-1 REV. D
B146773
MATERIAL 6061-T6 SHEET .063

Sp16-7-13

Note:

6/8/2016

TPI Waterjet cutting follow up sheet

wc100131

machine hours	1227h
diamond hours	157h
mixing tube hours	6h
TAJ calibration	13-06-2016

P/O: 32646

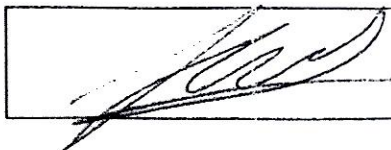
customer po	part #	Qty	lot #	date done	cut by	quality spot check	Note
dart 32646	d4925-1	18	see mill test	08-Jul-16	GR	Jonathan Lessard Gabriel Rioux	add .002 to the .25 and (26) hole
dart 32646	d4462-3	2	see mill test	08-Jul-16	GR	Jonathan Lessard Gabriel Rioux	add .002 to the .128 hole
dart 32646	d4463-1	2	see mill test	08-Jul-16	GR	Jonathan Lessard Gabriel Rioux	add .001 to the .098 and the .206 hole
dart 32646	d4463-7	2	see mill test	11-Jul-16	GR	Jonathan Lessard Gabriel Rioux	
dart 32646	d4463-13	2	see mill test	11-Jul-16	GR	Jonathan Lessard Gabriel Rioux	

→ SOME ARE OVAL

Opérateur



Superviseur



8/16-7-13